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Tax News

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TAX NEWS

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A recent article on the valuation of future interests for estate and gift tax purposes draws an analogy between the mathematical computation of the odds in a game of chance and that which is used to determine the value of a future interest such as a reversion or remainder of an estate for years or life.

It is interesting to pursue the reasoning on which valuation theory is based. There are two considerations—chance and discount. Let us explore the avenue of chance.

Example 1—Suppose X bets Y that Y can't throw two heads in succession. What odds should Y get? There are four different ways two coins can be tossed in succession: head-head, head-tail, tail-head, and tail-tail. Only the first one wins for Y. Y has one chance in four, then, so Y should get odds of 3 to 1. If X puts up $3.00 and Y puts up $1.00, Y's expectation is ¼ x 4, or $1.00. Y pays a dollar for a right worth a dollar.

Y figures the worth of his expectation by multiplying together the amount he can win and the chance he will win. The fraction he uses to express his chance of winning is made up as follows:

$$\frac{\text{Number of ways to win}}{\text{Total number of ways it can happen}}$$

Example 2—What are the odds there is a "7" in the first two numbers on your license plate? The total number of possibilities is 100 (all the numbers from 00 through 99). There are 19 winning possibilities: 70 through 79; and 07, 17, 27, 37, 47, 57, 67, 87, and 97. So the chance is expressed by the fraction 19/100.

Example 3—Suppose Mary and Jane are joint tenants with right of survivorship in Blackacre, worth $100,000. The chances are 3 to 1 (according to a mortality table) that Mary will outlive Jane. What is the value of Mary's survivorship right? In making this computation we must forget about the passage of time as it comes under the "discount" factor. Be careful when dealing with odds like "3 to 1" as these odds mean 3 chances out of 4 and the fraction to be used is ¾, not 2/3. Mary's right is worth: $100,000 x ¾ = $75,000. Jane has only one chance in four of being the survivor so her right is worth $100,000 x ¼ or $25,000. Winning chances plus losing chances equal total number of ways it can happen.

Another interesting examination of the theory of valuations is discussed in a recent Prentice-Hall publication as it applies to the valuation of a savings in costs and taxes in terms of sales equivalents. For example, the article assumes a profit margin on sales of 20% and notes that a tax saving of $1,000 at the 52% corporate rate will net as much as an increase in sales of $10,417. A cost saving of $1,000 is equal to a sales increase of $5,000. To get the equivalent in sales (or other trade or business receipts) of a cost saving of any amount, the following formula applies:

Sales Value = Cost Saving ÷ % Profit Margin

The sales value of an employee's suggestion that saves $5.200 a year, if the profit margin is 9.7%, would be $53,608—$5,200 divided by 9.7%.

To get the equivalent in sales of a tax saving of any amount, use the following formula:

$$\text{Sales value} = \frac{\text{Tax Saving} \div (1 \text{ minus } \% \text{ Tax Rate})}{\% \text{ Profit Margin}}$$

A tax saving of $5,200 with a profit margin of 9.7% and a tax rate of 52% results in a sales equivalent of $111,684.

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presenting the information in an outmoded manner? The financial reports presented to stockholders and the public today are practically the same as the type used many years ago for reporting to the "manager-owner." Since the financial reports made public today are not at that time being used as reports to the "manager-owner" but as reports to future investors, labor, stockholders, and the public, surely the information can be presented in some other form that will be more acceptable and more enlightening to the parties now interested in published reports. There seems to be an open field for the re-working of accounting statements to show how the company stood at the beginning of the year, what changes have taken place and how, and the position of the company at the end of the period.